UPDATES: Area Studies

Data updates from the Resources and Technology Division

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Georgia-Florida Coastal Plains Area Study Links Agricultural Production and Natural Resource Data

- **Study area covers 54,000 square miles of southeastern Georgia and northern Florida. About 15 percent of the area is agricultural land, of which 57 percent is used to grow corn, cotton, soybeans, peanuts, and wheat.**

- **About 85 percent of the agricultural land contains soils with a high to very high potential to leach, and about 12 percent is classified as highly erodible.**

- **Pesticides were applied to most crops, but some non-chemical pest control methods were also used. Soil nitrogen testing was performed on 26-67 percent of cropped land.**

This issue of **RTD UPDATES** summarizes the Georgia-Florida Coastal Plain Area survey data. It presents initial information on conservation practices, pest and nutrient management practices, chemical use, and tillage methods. In addition, soil characteristics were used to determine erodibility and leaching potential. The Area Studies project is a data collection and modeling effort designed to assess national policy impacts. The focus is on the development of multi-year, farm-level data that link production activities to environmental characteristics for selected regions. The effort involves the Economic Research Service (ERS), the Soil Conservation Service (SCS), U.S. Geological Survey (USGS), and the National Agricultural Statistics Service (NASS).

The Georgia-Florida Coastal Plain Area was one of four areas chosen in 1992. Others were the Iowa/Illinois Basins, the Upper Snake River Basin Area (Idaho), and the Albemarle-Pamlico Drainage Area. These sites were selected from those included in USGS's National Water Quality Assessment Program and were areas with significant cropland and agricultural chemical use levels.

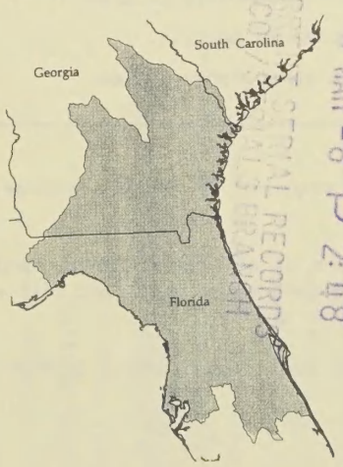
A survey in each area collected detailed information on production technologies, cropping systems, and agricultural practices at both the field and whole farm level. The survey sample points were chosen to correspond with National Resource Inventory (NRI) sample points. SCS conducts an NRI every 5 years, collecting soil, water, and other natural resource data for nearly a million sample sites nationwide. The use of the NRI points establishes a link between production activities and resource characteristics.

Contact: R. Keim or L. Nodine, (202) 219-0402.

About RTD UPDATES

RTD UPDATES is a semimonthly series featuring data relating to agricultural resources, the environment, food safety, and technology. These **UPDATES** report recent data from surveys of farm operators and others knowledgeable about changing agricultural resource conditions, with only minimal interpretation or analysis. Please contact the individual listed at the end of the text for additional information about the data in this **UPDATE**. If you would like to be added to the mailing list or have other questions about **RTD UPDATES**, contact Richard Magleby, (202) 219-0436.

Georgia-Florida Coastal Plain Study Area



Georgia-Florida Coastal Plain Area: Major crops and uses, 1992

Item	Corn	Cotton	Peanuts	Soybeans	Wheat	Pasture	CRP	Other
Acres in crop	836,563	519,214	774,702	607,520	312,625	682,595	435,63	1,178,442
% Acres in crop	16	10	14	11	6	13	8	22
Yield per acre	110 bu.	934 lbs.	3,481 lbs.	30 bu.	46 bu.	N/A	N/A	N/A
Commodity program acres	306,670	357,564	774,095	N/A	146,824	N/A	N/A	N/A

The total number of acres in agricultural land in the Georgia-Florida Coastal Plain Area is 5,347,000. N/A indicates not applicable.

Georgia-Florida Coastal Plain Area: Conservation practice use, 1992

Item	Corn	Cotton	Peanuts	Soybeans	Wheat	Pasture	All ag. area
	Percent of acres in crop						
Conservation plan	46	68	53	47	52	15	42
Chiseling and subsoiling	53	69	35	62	50	*	33
Conservation cover	8	12	13	6	9	*	9
Contour farming	9	15	17	13	11	*	9
Cover and green manure crop	3	7	11	*	*	*	5
Crop residue use	21	30	27	16	18	*	15
Grassed waterway	8	25	14	8	9	0	8
Grasses and legumes in rotation	4	6	1	*	0	*	2
Terrace	18	25	18	15	16	*	13
Pasture and hay management	*	0	*	0	0	8	3
Planned grazing system	*	*	7	0	0	12	4
No-till	4	0	0	8	0	0	2
Other conservation tillage	0	19	0	5	6	0	2

* Indicates too few observations for estimation.

Georgia-Florida Coastal Plain Area: Land erodibility, 1992

Item	Corn	Cotton	Peanuts	Soybeans	Wheat	Pasture
% Highly erodible land (HEL)	7	7	13	5	8	28
% HEL in no-till	0	0	0	35	58	N/A
% HEL acres in other conservation tillage	0	82	0	0	42	N/A
% HEL acres in commodity program	33	99	99	N/A	70	N/A
% Non-HEL acres in no-till	4	1	0	6	2	N/A
% Non-HEL in other conservation tillage	3	14	0	6	2	N/A

Notes:

Farmers are required to apply a conservation plan on operated HEL if they wish to be eligible for USDA program benefits.

Twelve percent of all agricultural land in the study area is classified as highly erodible. Erodibility levels presented are defined by sheet and rill erosion only. Less than 3 percent of the area would be classified as HEL due to wind erosion only.

Source: 1992 Area Study Survey, Economic Research Service, USDA.

Georgia-Florida Coastal Plain Area: Pest management practices, 1992

Practice	Corn	Cotton	Peanuts	Soybeans	Wheat
	Percent of acres in crop				
Type of pest management:					
Herbicide treatment	99	98	96	86	29
Insecticide treatment	12	98	53	42	53
Fungicide treatment	*	*	95	*	*
Biological pest control	4	20	5	*	0
Pest resistant varieties	25	39	20	19	37
Pheromones	5	62	10	3	7
Non-pesticide sprays	3	6	*	8	*
Destroy residues for host-free zone	74	92	83	73	72
Rotations	71	85	86	74	77
Pest control factor in timing/location	17	13	11	7	13
Source of pest management advice:					
On-farm pest specialist	6	49	11	6	7
Extension/university/State/Federal	35	63	45	40	41
Chemical dealer	32	45	37	49	37
Professional scout	8	69	20	6	7

* indicates too few observations for estimation.

Georgia-Florida Coastal Plain Area: Nutrient management practices, 1992

Practice	Corn	Cotton	Peanuts	Soybeans	Wheat
	Percent of acres in crop				
Soil nitrogen test	47	67	58	34	26
Tissue analysis	5	20	8	*	*
Manure usage	5	*	*	*	*
Most important factor influencing nitrogen use:					
Fertilizer company recommendation	12	*	5	5	12
Consultant recommendation	6	15	3	2	*
Crop appearance	15	10	7	6	15
Soil/tissue test	30	29	15	22	23
Extension Service recommendation	12	25	12	10	14
Standard amount for crop/rotation	24	11	31	29	22

* indicates too few observations for estimation.

Source: 1992 Area Study Survey, Economic Research Service, USDA.

Georgia-Florida Coastal Plain Area: Average application rates of pesticides, 1992

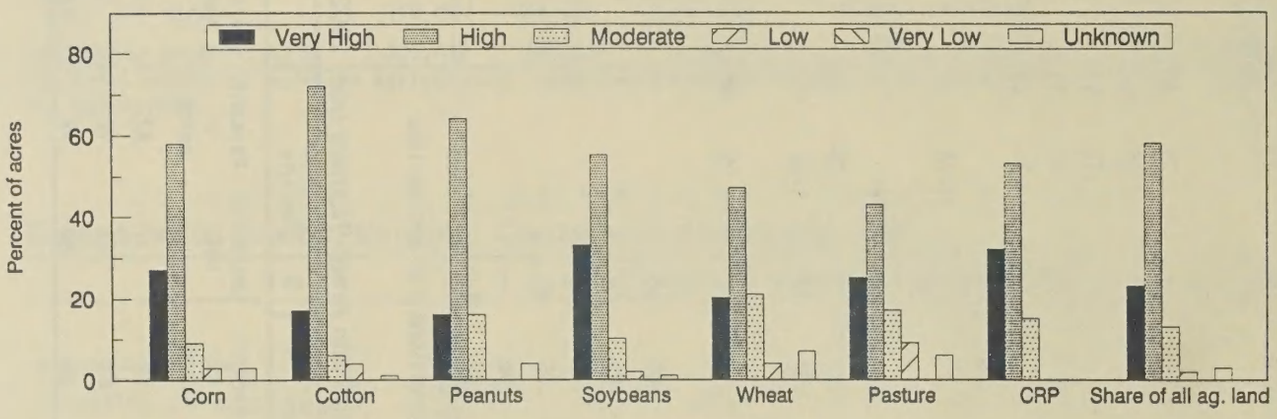
Pesticide	Cotton		Peanuts		Soybeans	
	Lbs/ acre	Percent of acres	Lbs/ acre	Percent of acres	Lbs/ acre	Percent of acres
Herbicides:						
2,4-DB	--	--	.25	38	*	*
Benefin	*	*	1.25	27	*	*
Bentazon	--	--	.52	43	--	--
Chlorimuron-ethyl	--	--	.01	14	.02	25
Ethalfluralin	*	*	.71	40	*	*
Fluometuron	.69	73	*	*	--	--
Metolachlor	*	*	1.78	32	--	--
Metribuzin	--	--	--	--	.27	35
MSMA	.87	51	*	*	*	*
Paraquat	*	*	.18	66	--	--
Pendimethalin	.81	38	1.02	24	.75	31
Insecticides:						
Aldicarb	*	*	1.05	30	--	--
Chlorpyrifos	*	*	--	--	--	--
Cyfluthrin	.05	26	--	--	--	--
Cypermethrin	.06	30	*	*	*	*
Esfenvalerate	.03	13	*	*	--	--
Lambdacyhalothrin	.03	25	--	--	--	--
Permethrin	.06	4	--	--	.14	22
Tralomethrin	.02	10	--	--	--	--

-- indicates no use reported.
* indicates too few observations for estimation.

Georgia-Florida Coastal Plain Area: Nutrient use, 1992

Nutrient	Cotton		Peanuts		Soybeans	
	Lbs/acre/ year	Percent of acres	Lbs/acre/ year	Percent of acres	Lbs/acre/ year	Percent of acres
Nitrogen	79	89	17	67	14	60
Phosphate	50	83	43	76	35	79
Potash	80	88	69	76	64	82

Georgia-Florida Coastal Plain Area: Soil leaching potential index*



Soil leaching potential (SLP) = texture component + organic matter component + pH component
* Potential of soils to leach highly soluble chemicals, based on intrinsic soil properties. Algorithm developed by J.B. Weber and R.L. Warren, North Carolina State University, in Weber, J.B. and R.L. Warren. "Herbicide Behavior in Soils: A Pesticide/Soil Ranking System for Minimizing Groundwater Contamination" Proceedings of the Northeastern Weed Science Society Vol. 46, 1992.

Previous RTD Updates provide information on seven other Area Studies sites: The Central Nebraska Basins, the White River Basin (Indiana), the Mid-Columbia Basin (Washington and Idaho), the Lower Susquehanna River Basin (Pennsylvania), The Eastern Iowa and Lower Illinois Basins, the Albemarle-Pamlico Drainage Area, and the Upper Snake River Basin. For copies of these, contact Russ Keim, (202) 219-0402 or Richard Magleby, (202) 219-0436.

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Economic Research Service
U.S. Department of Agriculture
1301 New York Avenue, N.W., Room 524
Washington, DC 20005-4788

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